REVENUE DEPARTMENT.

Jute Substitutes.

The demand for jute is steadily on the increase in British India and attempts are being made thereto extend the jute-growing area and to increase the yield of fibre from lands on which the crop is already grown. But the conditions in Mysore do not appear to be favourable for the cultivation of jute on any large scale. Therefore it is worth consideration whether the cultivation of other fibre-producing plants cannot with advantage be recommended to the raiyats.

2. Bulletin No. 3 of 1906 of the Agricultural Research Institute, Pusa, contains the results of an enquiry into the extension of jute cultivation in India by Mr. R. S. Finlow, B. Sc., F. C. S., Jute Specialist to the Government of Eastern Bengal and Assam; and in pages 34 to 41, information is given regarding some jute substitutes: The following precis made of the information contained therein, is published for the information of the people and the officers of the Revenue Department. The Deputy Commissioners of Districts are requested to circulate this to the leading raiyats and advise them to try these jute substitutes and mention the result thereof in the annual jamabandi report.

3. The two fibres which are likely to succeed as substitutes for jute, and promise to develop at a great rate in the near future are—

(*a*) *Hibiscus cannabinus.*

("Bimlipatam jute," "Bombay hemp," "Ambari" in Bombay, "Gogunara" in Madras and "Patwa" or "Mestha Pat" in Bengal and "Pundi" in Mysore)

and

(*b*) *Crotolaria juncea.*

(Sunn hemp, Jubbulpore hemp, "Sann" or "Sani" in Bengal and "Janupanara" in Madras and "Janupu" or "Sanab" in Mysore.)

4. *Hibiscus cannabinus* (or Pundi).

This fibre meets the growing demands of the gunny factories and it is used on a large scale for the manufacture of gunny bags. The places where most of the fibre is at present produced are the Vizagapatam District (48,731 acres) and the Guntur District (12,914 acres). The cultivators in Vizagapatam have three different kinds of this fibre.

(*a*) *Salakana Vittanu,* sown with the first rain on low lands in May and reaped in August or September in time to allow of transplantation of winter paddy;

(*b*) "*Pedda Gogu*" sown in June or July in high lands and reaped in November; this forms the major portion of the supply of fibre;

(*c*) "*Chilly Gogu*" grown chiefly as a vegetable and not as a fibre crop. The kind grown in Ongole is said to be different from all the above.

The profit.

5. It is a very paying crop at present prices. A fairly good yield is given at two kandis (1 kandi=500 lbs) per acre and the prices last season varied between Rs. 30 and 50 per kandi the latter figure being the price at the end of the season. These figures indicate a net profit of from Rs. 30 to 50 per acre. If the land is well manured the return is considerably higher.

Conditions of cultivation.

6. The rainfall of places where it thrives well is between 34 and 40 inches though it thrives also in places where the rainfall is heavier, provided the land is not water-logged. It responds well to manuring, the chief manure used being cattle or goat dung, refuse and tank silt. The cultivators in Vizagapatam have evolved a rotation with paddy, sesamum, ginger, pea, cotton, ragi, etc., which in addition to giving the land the advantage of growing one leguminous crop in three, provides for frequent manuring. The amount of seed sown per acre varies from 14 to 18 lbs for a pure crop. The seed is often raised from plants grown in nursery beds used for chillies, which being watered and manured produce a vigorous development of the plant and thereby healthy seed. "Bimlipatam jute" can be successfully grown as a pure crop and with good profit.

Harvesting.

7. The most suitable time for cutting is when the flowering stage is just over or when the fruits of the plants have just set.

Extraction of fibre.

8. The process is said to be similar to that adopted in the case of jute in which the plants are cut with a sickle just above the ground, and tied in bundles about eight inches in diameter, exposed to the sun for a few days in order that the leaves may wither, then placed upright in water about 1 to 2 feet deep for a day or two, and finally the whole plant is immersed completely in the clearest water available and is allowed to remain until fermentation has proceeded so far that the fibre

separates easily from the stem; then the fibre is stripped off each stem by hand and washed by swinging it round the head and threshing it on the surface of the water.

9. *Crotolaria juncea (or Janupu or Sanab).*

Crotolaria juncea is grown as a fibre plant and also as fodder and green manure. It is capable of thriving on almost any soil; it grows luxuriantly in the rich heavy alluvial soil of the Godaveri and Krishna Deltas; also though not so vigorously on almost pure sandy lands on the East Coast and in the shallow stony soils of the plateau districts in the Central Provinces.

(*N. B.*—This is cultivated in the Sidlaghatta Taluk both for purposes of fibre and for manure. It has lately been grown in the Nanjangud Taluk also for leaf manure.)

10. When grown for fibre, it is sown as a monsoon crop on high land with the first rains; it is also cultivated as a cold weather crop in the Konkan. About one maund (82 lbs) of seed per acre is usually sown. On account of the fact that it is allowed to grow thickly to prevent branching, very little after cultivation is required as the thick growth (2 to 3 inches apart is a suitable distance) tends to stifle weeds from the commencement. Usually the crop is cut when the seed is ripe; so that besides the fibre a good yield of seed is also obtained, which is esteemed as cattle food. If the plant is not cut until the seed is dead ripe the fibre suffers in quality.

Its use.

11. It is stronger and more durable than jute and is used for sails, ships, cordage, etc.

Profit to be made.

12. Taking the average yield of sunn hemp on good land at ten maunds per acre and the price at Rs. 9 per maund the gross return will be Rs. 90 per acre, giving net profit per acre of over Rs. 50. On inferior land without manure the yield may fall to five maunds giving a probable net return of Rs. 15 per acre which is more than would be obtained from most other crops on the same land.

Retting.

13. In damp regions the plant is retted green and in a dry climate it is dried before being steeped in water. In either case the stems are stacked erect for a few days to kill the leaves and afterwards are allowed to stand in water for a day or two in order that the process of retting may be complete at the same time over the whole length of the plant. The period of steeping varies between five days and twelve days or longer according to the temperature of the water. The water should be clear. In some cases the fibre is stripped from the stem and washed afterwards but in others the whole is threshed on the surface of water until all adherent matter has been washed away. Stem and fibre are then dried after which the fibre is stripped from the stem.

Yield.

14. The average yield in the Betul District is from five to seven maunds of 82 lbs per acre but on good land or with manure it reaches double this amount.

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